**Safety Precautions**

**Indications and Meanings of Safety Information**

This user's Manual contains safety symbols and signal words. The safety symbols, signal words, and warning messages are used to provide information to ensure the safe use of the 3G3MX2. The information provided here is vital to safety. Strictly observe the precautions provided.

**Signs of Signal Words**

- **WARNING**
  - Indicates an hazardous situation which, if not avoided, will result in serious injury or death. Additional hazard may result in property damage.
- **CAUTION**
  - Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury, or property damage.
- **NOTE**
  - Indicates a piece of information that will be useful in understanding the text.

**Alert Symbols in this Document**

- **WARNING**
  - Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury, or property damage.

**Precautions for Safe Use**

**Installation and Storage**

- Do not install in the following places.
  - Locations subject to direct sunlight.
  - Locations subject to high temperature exceeding the specifications.
  - Locations subject to relative humidity exceeding the specifications.
  - Locations subject to condensation due to severe temperature fluctuations.
  - Locations subject to corrosive or flammable gases.
  - Locations subject to exposure to water, oil, or chemicals.
  - Locations subject to shock or vibration.

**Transporting, Installation and Wiring**

- Do not drop or apply a strong impact on the product.
- Do not connect a power supply voltage to the control input / output terminals. Do so may result in damage to the product.
- Be sure to tighten the operator to the terminal block securely. Wiring work must be done after installing the unit.
- Do not connect any load other than a three-phase inductive motor to the U, V, W output terminals of the product.
- Take sufficient shielding measures when using the product in the following locations. Non-damage to the product.
  - Locations subject to static electricity or other forms of noise.
  - Locations subject to strong magnetic fields.
  - Locations close to power lines.

**Main Circuit Power Supply**

- Confirm that the input voltage of the Inverter is the same as AC power supply voltage.

**Operation and Adjustment**

- Be sure to check the function of motors and machines before operation because the inverter speed can be changed easily from low to high.
- Provide a separate hand brake if necessary.
- If the DriveProgramming stops during multi-function output, the output status is held. Take safety precautions such as stopping peripheral devices.
- Even if the inverter power supply is turned off, the counter-electromotive force occurs while the PM motor rotates, which may result in electric shock.
- Do not remove the terminal block cover of the inverter until the PM motor stops.

**Maintenance and Inspection**

- Mount the product vertically on a wall with the product's longer sides upright. The material of the wall has to be nonflammable such as a metal plate.

**Precautions for Correct Use**

**Installation**

- Mount the product vertically on a wall with the product's longer sides upright. The material of the wall has to be nonflammable such as a metal plate.

**Error Retr function**

- Do not turn the power on when the error is displayed. The power must be turned off before removing the alarm.

**Non-Stop Function at Momentary Power Interruption**

- Do not turn the power on when the error is displayed. The power must be turned off before removing the alarm.

**Operation Stop Command**

- Provide a separate emergency stop switch because the STOP Key on the Operator is valid only when function settings are performed.

**Conformance to EC Directives**

- It is necessary to use optional EMC filter to comply with EMC directive (EN55011). For earthing, selection of cable, and any other conditions for EMC compliance, please refer to the manual for installation.

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**Safety**

For use of the drive as a safety device, to meet the requirements of the IEC61800-3.

**UL Cautions**

- Use 75°C Cu wire only.
- For use of the drive as a safety device, to meet the requirements of the ISO13849-1, please refer to user's manual.

**UL Fuses**

- Suitable for use on a circuit capable of delivering not more than 100,000 amps, symmetrical Amperes, 240 or 480 Volts Maximum.
- When Protected by CC, G, or JR Class Fuses, or when Protected by a Circuit Breaker Having an Interrupting Rating Not Less Than 100,000 amps Symmetrical Amperes, 240 or 480 Volts Maximum.
- Install device in pollution degree 2 environment.
- Maximum surrounding air temperature rating of 50°C. 
- Solid State solid state circuit protection does not provide branch circuit protection. Branch circuit protection must be provided in accordance with the National Electric Code and any additional local codes.

**Fuse Size**

- Fuse Size: Type Rating
  - 10A, AIC 200kA: 3G3MX2-AB001, -AB002, -AB004
  - 15A, AIC 200kA: 3G3MX2-AB015, -AB022
  - 30A, AIC 200kA: 3G3MX2-A3001, -A3002, -A3004, -A3007, -A4004, -A4007, -A4015, -A4022, -A4030
  - 40A, AIC 200kA: 3G3MX2-A4001, -A4002, -A4004, -A4007, -A4015, -A4022, -A4030
  - 60A, AIC 200kA: 3G3MX2-A6001, -A6002, -A6004, -A6007, -A4004, -A4007, -A4015, -A4022, -A4030
  - 80A, AIC 200kA: 3G3MX2-A8001, -A8002, -A8004, -A8007, -A4004, -A4007, -A4015, -A4022, -A4030
  - 100A, AIC 200kA: 3G3MX2-A10001, -A10002, -A10004, -A10007, -A4004, -A4007, -A4015, -A4022, -A4030

**Torque (N-m)**

- AWG16 (1.3 mm2): M3.5 1.0
- AWG10 (2.1 mm2): M4 1.4
- AWG6 (3.0 mm2): M5 3.0
- AWG4 (2.1 mm2): M6 3.9 to 5.1
- AWG2 (3.4 mm2): M8 5.9 to 8.8

**Wire Range**

- Type: Required Torque/Required Wire Range:
  - AWG16 (1.3 mm2): M3.5 1.0, AWG10 (2.1 mm2): M4 1.4, AWG6 (3.0 mm2): M5 3.0, AWG4 (2.1 mm2): M6 3.9 to 5.1, AWG2 (3.4 mm2): M8 5.9 to 8.8

**SUITABILITY FOR USE**

Omron Companies shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the product in the buyer's application or use of the product. At buyer's request, Omron will provide applicable third party certification documents identifying ratings and limitations of use which apply to the product. These ratings and limitations are not sufficient for a complete risk assessment of the suitability of the product in combination with the end product, machine, or system. If application or use of the product by the buyer shall be solely responsible for determining appropriateness of the particular product with respect to Buyer's application, product or system. Buyer shall take application responsibility in all cases.

NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY OR IN LARGE QUANTITIES WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS. AND THAT THE OMROM PRODUCT(S) IS/ARE PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE GENERAL EQUIPMENT OR SYSTEM.